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# Children applying mindfulness

## **Exploring experiences of children in applying a school-based mindfulness programme to their lives.**

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## **Abstract**

Evidence for the effectiveness of mindfulness-based interventions for children and young people's well-being is growing, particularly within educational settings. To date, very few studies have explored how children experience and apply mindfulness. This qualitative study investigated how children who received long-term mindfulness training applied mindfulness to their everyday lives. Year 6 Children (average age 11) were interviewed in three focus groups with their peers, in a semi-structured format, and the data was analysed using an inductive thematic analysis. The findings indicated that the children described mindfulness as assisting with their emotion regulation. Four themes were identified: (1) processes of emotion regulation (2) dysregulation prompt to apply mindfulness (3) challenges and strategies and (4) the conditions that support or hinder mindfulness use. These findings are discussed in the context of theories and evidence on emotion regulation, attachment, and mechanisms of mindfulness. Implications of these findings for future research of meditation-based approaches in schools, for example, self-compassion and kindness practices, are considered.

## **Keywords**

mindfulness; children; school-based; emotion regulation; thematic analysis

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## Introduction

Since the development of Mindfulness Based Stress Reduction (MBSR) several decades ago (Kabat-Zinn, 1990) and Mindfulness Based Cognitive Therapy (MBCT) (Segal, Williams, & Teasdale, 2013) more recently, the evidence-base on their effects has grown exponentially. Cumulative research suggests that adults who participate in Mindfulness-Based Interventions (MBSR/MBCT or adaptations of these) benefit from moderate treatment effects in reductions of distress (Erberth & Sedlmeier, 2012; Keng, Smoski & Robins. 2011; Khoury et al., 2013) including specific effects on reduction in the recurrence of depression and depressive symptoms (Khoury et al. 2013; Kuyken et al., 2008), reductions in anxiety and perceived stress (Khoury et al. 2013; Shapiro, Astin, Bishop & Cordova., 2005) and medical symptoms (Williams, Kolar, Reger and Pearson, 2001). Improvements in well-being have also been found, including satisfaction with life, quality of life and self-compassion (Erberth & Sedlmeier, 2012; Shapiro et al., 2005). MBSR applied broadly in healthy and clinical populations and MBCT for recurrent depression were developed for adults (Segal et al., 2013). There currently exist multiple mindfulness-based programmes for children and young people in clinical contexts (Semple & Lee, 2011) and in schools (see overview in Kaunhoven & Dorjee, 2017).

There have been several drivers for well-being/mental health interventions in schools. Firstly, the age of onset of major depression has been dropping, with the 13-15 age-range now being the most common age bracket for onset (Zisook et al., 2007). There is also rising prevalence of mental illness with its associated distress and economic costs (McCrone, Dhanasiri, Patel, Knapp, & Lawton-Smith, 2008). Development of mindfulness skills at an early age could have protective effects on mental health (Carsley, Khoury & Heath, 2018; Mindfulness All-Party Parliamentary Group, 2015), but the relevant research evidence on long-term impact of mindfulness training in childhood is virtually absent. Secondly, mindfulness-based programmes may boost social and emotional well-being (Weare, 2015) and develop “mental capital”, which has been defined as the “cognitive and emotional resources that ensure resilience in the face of stress, and flexibility of mind and learning skills” (Mindfulness All-Party Parliamentary Group, 2015, p4). Thirdly, evidence is mounting for the link between health, well-being and educational achievement (e.g., Bennett & Dorjee, 2015). There is a growing understanding that attainment and well-being are not compartmentalized, but closely interconnected (Durlak, Weissberg, Dymnicki, Taylor & Schellinger, 2011; Suhrcke & de Paz Nieves, 2011). Therefore, schools are increasingly seen to have a key

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role in supporting children's mental health and flourishing with possible broad reach and impact (Public Health England, 2014).

Mindfulness practices develop adaptive attention regulation, cultivate non-judgmental awareness and encourage acceptance of present moment experience (Kabat-Zinn, 2005; Teasdale, Segal & Williams, 1995). Shapiro and her colleagues proposed a model of mindfulness in the adult research context: a triad of attention, intention and attitude (Shapiro, Carlson, Astin, & Freedman, 2006). "De-centering" (Fresco, Segal, Buis & Kennedy, 2007) or "re-perceiving" (Shapiro et al., 2006) is considered the key mechanism by which positive psychological change is enabled, as participants are able to dis-identify from their experience including thinking/perception. This facilitates a move to considered responding, rather than automatic reactivity and can increase psychological flexibility (Hayes, Strosahl, & Wilson, 1999; Segal et al., 2013). Mindfulness is trained or cultivated through both informal practice, simply noticing non-judgmentally whatever is happening in that moment, and formal practice, deliberately setting aside time to undertake a particular mindfulness practice. In adults, benefits seem to be correlated with the amount of formal home practice reported by participants (Carmody & Baer, 2008; C. Crane et al., 2014), although the evidence on this is somewhat inconclusive, due in part to methodological issues (Vettese, Toneatto, Stea, Nguyen & Wang, 2009).

There have been several initial (Burke, 2010; Greenberg & Harris, 2012; Harnett & Dawe, 2012; Weare, 2013) and more recent systematic reviews (Felder, Hoyos, Tezanos, & Singh, 2016) and meta-analyses (Carsley et al., 2018; Kallapiran, Koo, Kirubakaran, & Hancock, 2015; Zenner, Herrnleben-Kurz, & Walach, 2014; Zoogman, Goldberg, Hoyt & Miller, 2015) attempting to bring together the growing body of evidence on mindfulness-based approaches with children and teenagers, much of which has been conducted in school settings. Most of the evidence is problematic with regard to the definitions and content of mindfulness-based interventions (MBIs), for example, whether Buddhist or secular, and the centrality of mindfulness practice to the programme, as well as the quality of the research designs (Felder et al., 2016). However, the recent meta-analyses conclude that there is promising evidence in support of mindfulness as a possible approach to improving cognitive performance and aiding resilience to stress in children and adolescents (Zenner et al., 2014). There is also initial cumulative support for mindfulness training decreasing anxiety and depressive symptoms, and promoting well-being in both nonclinical and clinical populations (Kallapiran et al., 2015). Klingbeil et al. (2017) found small positive treatment effects across several therapeutic domains ranging from academic achievement to internalizing and externalizing

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problems to physical health, and reported that generally treatment effects were stronger at follow-up, suggesting continuing practice was important. Similarly, the most recent meta-analysis on mindfulness in schools reported small to moderate effects on mental health of children and adolescents (Carsley et al., 2018).

Zoogman et al. (2015) concluded that MBI's may be utilized safely for a whole range of clinical and well-being outcomes, although treatment effects were larger for clinical than non-clinical samples. They suggested that research so far points to mindfulness cultivating a “foundational improvement” (p. 299) in a basic psychological process, such as attention or regulation, a “top-down” process that supports good psychological functioning (Zoogman et al., 2015). Mindfulness techniques may also support children in developing bottom-up self-regulatory skills associated with automatic orienting of attention which is particularly important given the under-developed neural substrates of executive control in children (Kaunhoven & Dorjee, 2017). Having effective regulation skills in childhood supports resilience across the life-span (Greenberg & Harris, 2012; Moffitt et al., 2011). Possible modulations in attention and emotion regulation resulting from mindfulness training with adolescents and pre-adolescents have been investigated from a neuroscientific perspective also with a call for more research in this area (Kaunhoven & Dorjee, 2017; Sanger & Dorjee, 2015; Sanger & Dorjee, 2016).

Qualitative research is an important complement to outcome research on mindfulness-based programmes, enabling participant-focused insight into the meaning and complexities of quantitative findings. However, as in most psychological research, qualitative studies have lagged behind, especially with children (Ager, Albrecht & Cohen, 2015). In a recent meta-ethnography of MBIs, including mainly MBSR and MBCT with clinical adult populations such as those with depression, cancer survivors, and older adults with back pain, participants described a shift from habitual patterns of reactivity to being able to notice their experience non-judgmentally, including how they were viewing and relating to their current experience (Malpass et al., 2012). Being able to dis-identify with particular (limiting) ways of thinking, as well as staying with the difficult, enabled a transformation in the relationship to the experience of illness, and eventually to a shift in relationship to self, the “emergence of (an) observing self” (Malpass et al., 2012, p. 68). This parallels theory about how mindfulness works: stepping out of automaticity, decentering from thoughts, and relating to experience more kindly (Kabat-Zinn, 2005; Segal et al., 2013; Teasdale, 1999). It is not clear if similar patterns of change underlie children's and adolescents' experiences of practicing mindfulness, the mechanisms may well be developmentally specific and somewhat different.

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There is very limited qualitative research into mindfulness programmes with pre-adolescent children (Ager et al, 2015; Coholic, 2011; Coholic & Eys, 2016; Thomas & Atkinson, 2017) and it is unclear whether children experience or utilize mindfulness interventions in the same way as adults. School-based mindfulness programs are usually quite different from adult MBI's - they are often more didactic, delivered to a whole class of conscript children with limited inquiry elements and the practices are shorter. Research also seems to suggest that the majority of children do not practice formally at home (Huppert and Johnson, 2010). The extant qualitative research suggests that mindfulness programmes are acceptable to children and they experience inter- and intra-personal benefits including improved emotion regulation (Coholic, 2011; Coholic and Eys, 2016). However, methodological issues, including the inclusion of parents and carers in the interview process in the Coholic studies, may have introduced bias. Only two published qualitative studies investigated the experiences of conscript primary age children who received a school-based mindfulness programme (Ager et al. 2015; Thomas & Atkinson, 2017). The dataset of one of these studies (Ager et al. 2015) consisted of journals the children kept over the course of the 10-week "Meditation Capsules" programme (Etty-Leal & Judge, 2010), although sometimes there were gaps in these. Three main interrelated themes emerged through the thematic analysis: students' perspective on their well-being, including awareness, happiness and self-regulation; students mindful engagement, including a heightened awareness, of self, others and the environment; and conflict resolution with siblings and friends. However, the findings did not make it clear how the children remembered to utilize a mindful approach when experiencing conflict, either with others and/or within themselves. Data in the form of journals does not allow further enquiry about children's experiences in applying mindfulness to their lives.

A more recent study investigated Year 4 children's and teachers' perspectives of the Paws b mindfulness programme (MiSP, 2014), over 6 weeks (Thomas and Atkinson 2017). The findings suggested the programme was perceived to be accessible and feasible, and that it may help improve attention, meta-cognition and self-regulation. However, the mix of teacher and child reports in the dataset, and the differential means of obtaining the data for these two groups, means that it is unclear whether adult perspectives are privileged over child voices. Therefore, although these studies seem to suggest that children like mindfulness programmes in schools and find them beneficial, methodological issues related to how to draw out children's views without influencing them, limit these findings. In addition, it is unclear how children are using these skills inside and outside of the school environment.

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The current study aimed to understand how children embed and apply the mindfulness skills they learnt in school to the challenges they face in their lives. A qualitative approach was used to explore and understand the children's perceptions and experiences (O'Reilly and Parker, 2014) of how they were employing mindfulness in their daily lives in depth. Moreover, data was collected through focus groups solely with peers rather than by journals (which provide limited data (Ager et al, 2015)) or individual interviews with parents/carers present (which can limit or influence what children talk about (Gardner & Randall, 2016) or teachers. Focus groups are considered a good tool for eliciting the perspectives of children (Elliott, Lach, & Smith, 2005; O'Reilly & Parker, 2014), allowing them to express themselves with peers in a supportive group setting (Powell & Single, 1996) as well as mitigating the tendency of children to give the answer they think an adult might want in an individual interview (Kellett & Ding, 2004). Generally, children of this age find it easier to express themselves through speech rather than through written language, such as the journal entries utilized in Ager, et al. (2015). Focus groups allow children to utilise their own language and cultures, and for the researcher to encourage expansion and elaboration of the issues they bring (Singh & Keenan, 2010). The children were interviewed to understand how they are using mindfulness in their daily lives, and how mindfulness may be helpful or not in managing the challenges they face.

### Method

#### Participants

*<Table 1: Participants in the three post-intervention focus groups>*

Participants were 15 Year 6 children (male 3; female 12) from a co-educational state primary school in North West Wales, aged from 10-11, who were interviewed in three focus groups (Table 1). The school serves a large housing estate of both rented and private housing in a coastal town, 94% of the children come from English speaking homes, and the percentage of pupils on free school meals (an indicator of socio-economic status) is below the national average.

#### Procedure



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The children received training in the Paws b curriculum in Year 4 (developed by Sarah Silverton, Tabitha Sawyer and Rhian Roxburgh in collaboration with the Mindfulness in Schools Project - MiSP). Paws b is a programme of six, one hour long lessons, or twelve, 30 minute lessons, offered formally as part of the Personal, Social and Health Education (PSHE) curriculum, and routinely delivered in this school since it was developed and piloted there. As part of the curriculum children learn ways to regulate themselves when they are experiencing challenging feelings, how to relate to difficult thoughts and the story-telling mind, how to respond to difficulty rather than react, and ways of cultivating happiness. They also learn about how key parts of their brain work, including the flight/fight/freeze stress response (see Thomas and Atkinson, 2017 for a detailed description of the programme). The course is delivered with a mixture of didactic teaching using power point, discussion and short experiential mindfulness practices. Home practice of these is encouraged but not compulsory.

This Year 6 class, being already trained in the Paws b curriculum, received additional training as part of a pilot spiral mindfulness program developed by their teacher with the focus on applying mindfulness to their lives. This involved reviewing the Paws b programme and extending and embedding learning into challenges that children may be facing, particularly regarding relationships, social media and transition experiences. These are key issues for children of this age (Dunn, 2004) preparing for a transition into secondary school. The children continued to practice mindfulness in regular lessons across subjects where relevant and in an extra-curricular mindfulness club that met weekly as part of the embedding. The format of embedding the practice in regular lessons was flexible and not divided into discrete set of lessons dedicated to mindfulness practice only. The school teacher who delivered the programme had long-term experience in developing and teaching mindfulness-based programmes to older primary school children, including Paws b. Hence, it is expected that the programme would have been delivered with a high degree of fidelity and the children would have been practicing mindfulness for over two years.

Ethics approval was obtained from Ethics Committee in the School of Psychology at Bangor University for this project prior to participant recruitment. An information sheet about the study was sent to all parents in Year 6, outlining the aims and methods of the research, and the benefits and risks involved. They were encouraged not to volunteer their children for the research if they had been experiencing a difficult transition such as parental separation, trauma or bereavement. Participation in the research was entirely voluntary and required both the parents' consent and child's assent. All the children who volunteered to take part did so, except those who were absent on the day or where the consent form had not

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been properly completed. This partially accounted for the different sizes of the focus groups and the greater percentage of female participants which might also possibly reflect greater willingness of females to volunteer for this research and share their experiences. The children were selected for each focus group by their teacher depending on their availability at the time each started (for example, some children were outside for PE).

At the end of the spiral mindfulness programme, the teacher invited the children to draw a picture on: “How do I apply mindfulness to my life?” They were instructed to bring the picture to the focus groups. Children were interviewed in a large resources room in one of three focus groups for about an hour using a semi-structured interview format. The focus groups were held in school time and within the week after the spiral mindfulness programme was completed. The focus groups were video-recorded.

The focus group moderator (first author) was a psychologist with extensive experience in working with children individually and in groups. She had post-graduate level training in qualitative methodology and received ongoing guidance and supervision from the second and third author during designing of the study, data collection, data analyses and write up of the findings.

### Measures

Focus groups were used to collate data in two stages. The first stage involved settling the children into the focus group, and building trust with the interviewer, for example, by letting them examine the recording device, discussing confidentiality, and that their involvement was entirely voluntary. Each child filled in a brief form about their mindfulness practice, which included questions about how often they practised mindfulness, and how often they found it of benefit (Appendix A). This became part of the data set. The second stage was organised around a focus group protocol comprising semi-structured interview questions (Appendix B) that explored the experience of the children of mindfulness and how they applied it to their lives, although the interview process was child-led and the moderator responded with reflexivity within each focus group, allowing each child’s response to influence the next question. The pictures were an opening prompt to ask the participants about their experiences of mindfulness and its’ value in their daily lives (Figures 1 – 4). Each focus group was video-recorded, and these recordings were transcribed later.

At the end of each focus group the children were offered the opportunity to write down anything they have not had the chance to say, or did not want to say within the group context, in case they were

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feeling inhibited by being in a group. They were also encouraged to write a message to another young person about mindfulness in their lives, in order to capture any important perspectives that were less influenced by what children think adults want to hear.

### Data analysis

This qualitative study utilised thematic analysis (Braun & Clarke, 2012) to identify, analyse and report themes developing from the data. The data set included anonymised transcriptions from the three focus groups together with the written information from the open-ended questions of the Mindfulness Practice form, any writing or labeling from the children's drawings (but not the drawings themselves), and the end of focus group form. This process of 'method triangulation' (using data of different types) was effective in enabling the children to illustrate meanings and interpretations. For example, the written information was broadly convergent with the group discussions; the drawings were useful to prompt discussion although the written information on the drawings itself was limited. Two of the children used the form at the end of the session to share information with the researcher they had not wanted to share in the group, about how mindfulness was helping them manage particularly difficult situations in their home lives.

Thematic analysis is not attached to any one epistemological methodology (Braun & Clarke, 2012) and was utilised within this project for its value in searching for patterns of meaning across the data set in order to answer the research question: What are the experiences of primary-age children in applying a school-based mindfulness programme to their lives? An essentialist method of analysis was deployed, driven by the data itself, "which reports experiences, meanings and the reality of participants" (Braun & Clarke, 2006, p. 9) and is suited to an initial study such as the current one. The intention was to provide a "rich thematic description" (Braun & Clarke, 2006, p. 11) over the whole data set with minimal organization. Themes were identified at a semantic level, that is, at the level of explicit meaning rather than attempting to interpret what the children said (Braun and Clarke, 2012).

Following Clarke and Braun's (2014) recommendations for inductive thematic analysis, transcripts from each of the focus groups were read and analysed through the rigorous application of the following six phases: familiarization with the data, including transcription; coding; searching for themes; reviewing identified themes; defining and naming of themes; and writing up. Analysis was recursive, involving movement back and forth between the stages. Each focus group transcript, with the accompanying written

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information, was coded separately, a thematic map created, and then themes were integrated across focus groups. The same data extract could have more than one code applied to it. Themes were selected by prevalence, but particularly whether the data provided a “rich description” (Braun and Clarke, 2006, p11) related to the research question. Themes and sub-themes were continually reviewed as the analysis progressed. Only material that was irrelevant to the research question was excluded. The transcript and codes for one focus group were audited by an experienced qualitative researcher (second author) to ensure credibility. The initial results were then reviewed by both the second and third author for compatibility between themes derived and evidence from children’s quotes to enhance methodological rigor of the analysis. Any discrepancies were pointed out to the first author and the data set was re-analysed based on this guidance. This process was repeated one more time under the guidance of the third author. All three authors agreed on the final results of the data analyses.

## Results

The overarching theme of the data set was mindfulness as *emotion regulation*. Mindfulness helped the children to regulate difficult and unwanted experiences, to calm down rather than be driven by emotional reactivity. The *processes* involved in emotion regulation were described in rich detail (theme 1). The resulting emotion regulation benefited different areas of children’s lives. Remembering to practise mindfulness was mostly prompted by an experience of *dysregulation* (theme 2), which the children mainly described as a feeling, but also included experiences of thoughts, sensations and difficult interpersonal situations. The children used mindfulness instrumentally, to help them to feel better. They experienced several *challenges* (theme 3) to the practice of mindfulness; how these challenges, essentially experiences of dysregulation, were managed and approached by the children, contributed to emotion regulation. A variety of different *conditions* (theme 4) offered support or acted as an inhibitor to the practice of mindfulness, both generally and within the moment of dysregulation.

The results from the questionnaire about their mindfulness practice that the children filled in at the beginning of the focus group (Appendix A) demonstrated that all of the 15 children liked doing mindfulness in school (mean: 6.5; range 5-7 on a 7-point Likert scale where 7 is very much). All of the children reported practising either everyday (2/15) or often (13/15), and the whole sample reported benefitting often (8/15) or everyday (7/15).

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The children described four main *process elements of emotion regulation* when applying mindfulness: *feeling good*, *present moment focus*, *stepping back*, and the *possibility of intentional action*. Feeling good, the first process element, included calming and relaxing as Henry described: “Yes I think mindfulness .... it feels .... like a massage, it’s relaxing but mindfulness makes me feel the same way”. Mindfulness can also support “rest and digest”, refreshing the mind and body as Cindy reported: “I get really tired but when I do mindfulness I calm down and feel better”. However, this was not universal. For example, Mabel talked about how sometimes a mindfulness practice resulted in tiredness, and a lack of motivation at school. Doing it for “too long”, can be experienced as tiring, not always as “rest and digest” since mindfulness can be effortful, particularly in less experienced practitioners.

Several children described how practising mindfulness helped them to feel safe; mindfulness seemed to enable them to calm worries and feelings, and that process engendered a sense of security and internal protection from outside hurts.

Julie: When I do mindfulness I feel like I’m really safe.

Interviewer: Safe, can you tell me a bit more about that?

Julie: It’s like when you’re in your bubble and like no one can hurt you and get to your feelings.

Children also described the importance of present moment focus, the second element; how concentrating on what they are doing in the present moment minimized distractions, including worry. Focusing on the fine detail of a drawing, on the body and the breath, or on what they were actually doing at the time, such as a task, were all mentioned. Mabel described how mindfulness “doesn’t make you focus on the future, you focus on the now”. Bess explained how coming to the body in the present moment supports moving away attention from worries in the mind, the breath and body as anchor: “It brings your mind away from what’s happening and it comes to your body in the here and now and your breathing, so you don’t have to worry about things”. The idea of a “mindful bubble” was used many times to describe this experience of present moment focus, and managing distraction, as Liam conveyed: “When you do mindfulness you’re in your own bubble and it’s sort of, you are not worried about things around you”. This concept and practice of a mindful bubble was mentioned as being regularly utilised in the context of work and assessments, helping children to concentrate on the current task.

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A further sub-theme was that of stepping back, being able to create enough space to see what was happening in the present moment from a different perspective. Henry described how he managed his feelings when someone posted a picture of him on social media without his permission:

Henry: I didn't like it, so I got quite angry but I wanted to say something to them. But also I liked it that they had put my name and said go follow my name, so I did a mindfulness practice and it just calmed me down. And I looked at the positives not the negatives.

Enid: Stand back.

Interviewer: OK so stand back, so when you stand back how does that help?

Henry: You just look at it again .... you see it in a different perspective.

Henry also portrayed how frustration at feeling "bad" at something was an obstacle to learning, and the stepping back and the calming of emotion regulation enabled the space to learn.

The children referred back to the flight, fight, freeze explanation about the stress response from Paws b and how they used this as a framework in stepping back. Understanding that what was happening in this moment was a stress reaction enabled an observer stance, a decentering. Liam related this to the challenge of social media as well as portraying how the space created in this process supports responding rather than reacting.

Liam: Like Yasmine said, with the messages thing you could sort of bring "flight fight freeze" into it, with "fight", text a mean thing back to them, "flight" being ignoring them altogether and "freeze", being I'm not sure what to do at all, that's like a really bad position to be in.

(Mindfulness) can help you choose or see sort of the more appropriate reaction, cos sometimes you do things before thinking about them so mindfulness can help you think about them more and come up with a more suitable solution.

Implicit in this stepping back process is an acknowledgment of what is happening now, that is "I am experiencing flight or fight". Esme expanded more on her experience of this knowing, and perhaps accepting, what is happening right now, and how that enabled her to go with the situation when playing netball rather than fighting it out of reactivity.

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Esme: Sometimes I might get confused because the ball has been passed to me and I don't need the ball as it's just been passed out, I just calm myself down and say, OK this is what is happening right now, just throw it and see where it can get to.

Stepping back seemed to offer space for alternative perspectives, reappraisal, to come into play, and children could access more positive self-talk that supported safety, choice and confidence. Sunny, for example, described how stepping back gave her the space to think to herself, about performing, "I can do it" and when flying, "it helped me to think, nothing is going to happen".

The open-mindedness created by stepping back may afford the possibility of intentional action, the final process element, to the children. They described choosing to act in a deliberate, non-reactive manner. Once one has seen what is happening and has taken a "backward step", there is more room to maneuver: one is not a victim of habitual reactivity at this point. For example:

Oksana: I do (mindfulness practice) mostly when I am eating, cos sometimes I try a lot of new things and I don't know what it's going to taste like. So I try it and mindful eating helps me calm it down to see if I like it or not. If it's too crazy I don't notice it.

.... It helps to calm me down as sometimes I don't like trying new foods what I don't want to have, so mindfulness helps me to try it as otherwise I wouldn't eat it at all.

Mindfulness seemed to help Oksana notice whether she actually likes or does not like what she is eating – otherwise, habitual reactivity would get in the way of eating. It may have helped her to eat in an intentional way.

Being able to choose how to respond seemed to be particularly important relationally, and this relational aspect of the practice was very prevalent in children's descriptions. The ability to reflect on what was happening relationally, empowered them to take actions like saying sorry or to step out of an escalating conflict. Oksana described this: "I have (a huge fall out with my brother) every time I see him, basically there is an argument going on between us, so I use mindfulness to calm me down and to not retaliate". Thus, mindfulness may have enabled children to "do the right thing" relationally. Frankie stated, for example: "It helps so you don't say, say if they're being, saying mean stuff to you, it helps so you don't say

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mean stuff to them”. Yasmine explained how mindfulness supports her to step out of her own reactivity and to begin to see how the other person might be feeling, to empathise, to look at something from inside the other’s shoes, and then to act more intentionally: “If you were the bully, if I were the bully I would probably, I would see how the other person was feeling and use mindfulness to be able to calm down before I say something again”.

The children seemed to practise mindfulness to help them regulate emotionally, and the practice itself was usually initiated by a *dysregulation prompt*. This included feeling prompts, like anger, sadness, worry or frustration, difficult thought prompts, challenging situational prompts, particularly interpersonal ones, and sensation prompts, usually discomfort. The participants of this study described applying mindfulness in an instrumental way, to help them with an experience of difficulty or one that was anticipated.

Remembering to practise mindfulness was usually prompted by a difficult feeling.

Mia: I don’t really plan to do it as I am not very good at planning, so I just think I am really nervous I’ll just do it. So if I wasn’t nervous and I was just really happy I wouldn’t do it. If I am nervous before I am going I will .... it’s just that you get the feeling cos I am so used to doing mindfulness, I just get the feeling and then just do it.

Fear and worry was a common prompt for a mindfulness practice, but other feelings prompted mindfulness use too. Sadness, anger, or feeling tired and tense:

Liam: Well I use mindfulness quite a lot as I’m always really busy as I do clubs every night after school, and don’t really get a lot of time as I’m always up .... And sometimes because I’m tired I get a bit sort of grumpy and I have to sort of calm myself down.

The children described how mindfulness can help them with more positive feelings of over-arousal like excitement or giddiness as well. Oksana summed up how it is usually the experience of a difficult emotion that prompts mindfulness use:



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Oksana: Because its basically what you feel, if you feel something you don't want, you're not happy with, you can't change it, you do a mindfulness practice to try to change it.

Interviewer: OK like what kind of feeling would that be?

Oksana: Like sad, or angry, like sometimes people lose it and then get over-exaggerated it so just to calm them down.

In addition to difficult feelings, challenging learning situations were a common prompt. Many of the children described how mindfulness helped them with tests, with performances, and when they were struggling with their work. Being able to calm themselves and not get caught up in reacting to difficulty gave them the option of being able to simply focus on the task at hand. For example Molly talked about struggling with maths: "I use it the most when in maths, when it is really hard, I use it to calm me down. When I use mindfulness it helps me to figure out the answer". However, a couple of children spoke about taking the chance to practise mindfulness before the feelings or situation became too much, or when it was possible to practise beforehand. Esme describes how sometimes "I am too angry and I just skip the step and I act before I think, so I try to do the mindfulness beforehand".

Sometimes challenging situations were interpersonal. Yasmine explained how she practised mindfulness as a way of managing herself in relation to others' mood:

Yasmine: I don't know why it's a bit awkward but when I see people's faces and they're happy and then they go dull and walk away I just sort of think, cos when you are stressed or something you are not smiling, so then your face goes quite dull. So I see someone's face and I walk over to them and look at their face and see what kind of mood they are in and if they are (in a bad mood) I'll do some mindfulness.

The children were also prompted by other difficult aspects of their experience. Several of them practised a "beditation" before bed to relate differently to their thoughts.

Mia: Before I go to bed the beditation, 'cos I find it really helpful 'cos I can never get to sleep, I am always thinking what's going to happen, is my brother going to come in and wake me up, is he going to do something stupid? I always think too far forward before something actually happens.

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Bess likewise spoke about practicing mindfulness to help her with thoughts during the day: “Mindfulness helps me most when I feel like I can’t keep on top of everything that’s happening because there is too much going on in my head. I use mindfulness to empty my brain of my worries”. Mindfulness was applied when the participants noticed an unpleasant sensation as well. This could help with working out a course of action. Mabel explained mindfulness helped her with the question “does this feeling of sickness mean I need some help or is it just excitement?:

Mabel: I also use it if I feel sick. Because sometimes I am having fun with people and then I feel kind of sick. And I have to really concentrate to see if I do feel sick or if I don’t. So I can tell a teacher if I do feel sick.

A few children did describe a routine around their mindfulness practice. Sunny, for example, described practicing “mindful seeing” when she woke up in the morning by looking at the things in her room because they were “just there”. Several of the children routinely practised a “beditation” (see Appendix C for a description of the practices) at night. This was also problem-focused though, a way of promoting sleep, when some intensity, excitement or rumination, was keeping them awake.

Mia summed up why and when mindfulness was usually practised:

Mia: It depends how I feel, if I felt like, I don’t know say, I was going to go, if my brother’s really annoying me I would probably do finger breathing or something like that, but it depends what I feel like doing, instead of doing something that’s planned out, I just do it.

Yasmine and Henry spoke about the possibility that all the practicing at some point integrates into the life, that you “get it”, a sense of approaching life with mindfulness.

Yasmine: You have to use what you know to, like there is one point in life when all the mindfulness lessons you’ve had, it all comes into one and if it goes well you get mindfulness, so it all depends on that.

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The children described a whole range of *strategies* that enabled them to manage the *challenges* they experienced in the practice, whether this was external distraction, embarrassment, or physical and/or emotional discomfort. This allowed them to sometimes regulate emotions which may have been stirred up by the experience of difficulty and to refocus. Thus, how successfully children managed the difficulties they experienced as they practised was closely linked to the main theme of emotion regulation.

*Distraction and the wandering mind* were the most prevalent challenges to mindfulness practice as Molly illustrated: “Sometimes your mind goes off and you say OMG my mind’s gone off”. Noise was the primary distraction mentioned, pulling the mind off somewhere else than where they had chosen for it to be:

Mia: I find it really hard to concentrate, if we do it in the class when we are having a lesson, and some people are outside and they are screaming and shouting and going yes well, when it’s like that, I’m trying but I can’t as my mind is concentrating on something else.

Oksana described how the external distraction of noise became an internal one of dysregulation: “When you do actually hear a noise you don’t feel as safe, as when it’s quiet you feel safe, and when it’s noisy you feel what’s going on?” Almost all the children stated that noise, especially at lunchtime when the mindfulness club was usually on, was a significant impediment to practice. Bess was an exception: “I sometimes can’t concentrate on mindfulness because it gets too quiet for me”. It would have been interesting to explore further with her whether external quietness resulted in more internal “noise”.

How the children managed these distractions had an impact on emotion regulation. The distraction itself could lead to further dysregulation.

Frankie: Mine is like Lola’s when your focus keeps just going away sometimes when the window’s open and the doors open as well and you just can hear everybody talking it gets on your nerves, why can’t you just be quiet?

Oksana explained how using the idea of “training a puppy”, a metaphor introduced within Paws b, helped with managing the wandering mind: “It’s more like we say our mind is wandering like a puppy, you can

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train it, it doesn't matter if it goes, you just got to bring it back and notice it". This suggests Oksana felt that the mind-wandering was normal, rather than a mistake. Sunny used this metaphor of the puppy to give an example of her experience in managing a wandering mind, and the challenge of this.

Sunny: Maybe not when you are doing it in the club but when we are doing it in the lesson, people who don't normally do it, they mostly like be silly and stuff. And then they make you laugh and then you just bring in your puppy again and calm it down.

Interviewer: Yes that's how it is isn't it? We are wandering off the whole time.

Sunny: Oh no, I've laughed, what am I going to do? .... It is just it's a bit hard trying to bring it back.

The "mindful bubble" was another metaphor that the children used to help explain and perhaps support themselves in relating to the wandering mind. Julie described how she feels if her mind wanders or she is distracted: "Yes, I feel like someone else or something has just popped my bubble and I try and bring it back again".

A further challenge, *embarrassment*, seemed to be a more internal distraction, thinking others might see the child as weird for practicing. The main way the children managed embarrassment was to *practise discreetly*, avoiding being seen.

Enid: I would do the "FOFBOC", I would do it sitting on the chair and then you could look down, because if you close your eyes you would look a bit weird in class but if you look down you won't.

The children also described the challenge of *unwanted sensations* such as sleepiness and discomfort, and how *movement* can be a strategy for managing this. For example:

Yasmine: When you are sitting down it really helps to make you relaxed but like Mabel said, you get really sleepy and so you can't concentrate. So if you did something like you had to stand up

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and wiggle your arms or something, I think that would be really helpful and keep you going.... so you are relaxing your bones but you are still awake.

John managed the discomfort of sitting or standing when it affected his concentration, by *beginning again*.

John: I'm like Bess when you are sitting down, the bubble round you, you feel a bit like fuzzy and when you are moving more you are not. It's like it feels like really uncomfortable sometimes .... Then I lose concentration I have to stop for a few moments then find like a steady spot on my chair or when I'm standing up and then I will start again.

Henry said when he was distracted by sensation during "finger breathing", he *changed practices*, another strategy.

Henry: I like finger breathing and then I don't, I like it because it helps and it's good but it tickles my fingers and I get distracted and like when you feel it it's normally on this finger here...

Interviewer: So sometimes it's too distracting is that what you are saying?

Henry: And I have to do a different practice.

Sometimes the discomfort was an emotional one, and a couple of children spoke about how being in the grip of a *strong emotion* meant missing out the mindfulness step before acting.

Esme: I feel like mindfulness you don't have to do it, it's an invitation, so maybe if I am really angry and like I just will think I can do a mindfulness practice, is it going to help but sometimes I am too angry and I just skip the step and I act before I think.

There were a couple of ways the children managed this. Henry used *movement*, walking, as a first step: "Sometimes when I get real upset, sometimes I go and take a walk and that calms me down. And I do a mindfulness practice when I've calmed down a little bit, and that calms me all the way down". Esme talked about *beginning again*: "Sometimes I just go and sit on the bench and I count to 10 and I just restart it".

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The final theme reported by the children was how a range of *conditions* made it more or less likely they would be able to utilize a mindful approach or practice to regulate their emotions. This included: the *ease of use* of the practices themselves; the importance of a *supportive community* including peers, school input and home; the importance of *movement*; and that *ongoing practice* begets practice if you are finding it helps you.

Children found many of the practices that had been taught within school very flexible and easy to implement. The children talked about being able to use the practices anytime and anywhere. Oksana stated: “I feel like I can do it anywhere cos even if I am standing up I can close my eyes and focus and everything”. The children also described how a practice could be done quickly, for example, Frankie: “I find like that you can use mindfulness on an everyday basis so if you are doing maths in school and you are struggling with it, you can just do it quickly before you start”. Sunny explained how it is helpful that the practices can be done discreetly: “sometimes when you do it wrong (the work) you get a bit upset, so if you just do it when you are not facing a teacher so she can’t see you and you just do it and it helps”. It was possible to adapt a practice to make it work better for them and Mia described how colouring and holding her tummy simultaneously was especially calming. “I used to do it like that (both hands on paper) but then .... I just held my belly and it just helps me to calm down a bit more”. However, one child also spoke about not being able to remember the steps within all of the practices.

*Mabel: I find something difficult about mindfulness and it’s like remembering the practices, cos when you do a practice and you have to focus on the different parts I always forget what I’m meant to be focusing on. And I forget most of the practices and stuff so that’s the one thing I find difficult.*

The participants clarified how a supportive community was an important condition that helped them to practise. Oksana explained what could happen, how contagious the distraction and silliness was, when peers were unsupportive.

Oksana: Mine’s a bit like what they’re saying about the mind wandering, if we’re doing it in lessons or class, people start making, they don’t respect us doing it if we are doing it and they start

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doing something silly, they laugh or are silly. So it's upsetting for us as they make us laugh and then we open our eyes and see who it is so it's a bit annoying.

Yasmine thought a lack of a *supportive community* might get in the way of her practicing mindfulness when she goes to secondary school, transitioning away from a school where mindfulness is very well embedded.

Yasmine: I think I am going to stop doing it because there is not clubs anymore and there is not that many people doing it. So if you do it in the year, there are like so many in just your year, you are still going to get distracted and you might think people will start like laughing at you, so you could do it under the table, but it just wouldn't feel the same for me as I won't be able to concentrate properly.

An understanding community helped support both concentration and focus as described above, as well as a feeling of safety. Liam reported: "If everyone around me is doing it I am very focused". A *supportive community* was more likely to enable a quieter space for mindfulness practice, important as most of the children found noise a difficult challenge to manage as mentioned in the previous section.

Seeing others practise could be inspirational too and a counter-weight to embarrassment.

Mia: I remember once in year 5, and I went to the toilets and I came out, and I washed my hands and a year 6 came in, and she sat down and I saw her like doing mindfulness and that really inspired me and well, I normally get embarrassed a bit if I do that but now I don't, and it really inspired me, so looking at people doing it is kind of helpful.

Good friends can also be very supportive to practicing when dysregulated. Frankie explained this clearly: "I would say Esme is the person that tells me about mindfulness cos if I'm really upset she will come to me and say, "are you alright? Come on, let's do a mindfulness practice". This sense of support seemed linked then to the embarrassment the children can feel when practising, as mentioned within the challenges and strategies sub-theme. How supportive those around them were seemed to directly affect this, and how they managed this particular challenge. Family had an impact too:

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Henry: Yes though sometimes it's really hard when you are walking somewhere and I get nervous. And I try to stop and sit on a rock but my dad told me to hurry up so I didn't have the time (to do a mindfulness practice).

Children also reported the importance of having mindfulness input in the school from having teachers who practise, to mindfulness clubs, regular practice in lessons and boosters on mindfulness, and "Masterminds": children who teach mindfulness to others by visiting classes and leading practices. This primary school was unusual in the degree to which mindfulness has been successfully embedded. This was clearly important for the children and a source of pride. Ongoing input from the school also helped them to remember to take the "mindfulness step" when they most needed it.

Interviewer: What about those other times you were talking about, if someone is mean to you, how do you remember to do it then?

Frankie: Cos of all the lessons we have had, it's just stuck in my mind and always there to do a mindfulness practice.

Several children talked about the impact of the teachers' practice, both that they really appreciated when the lead teacher for mindfulness in this school, who co-developed Paws b, was facilitating a practice, and that children not in her class were less likely to be Masterminds of Mindfulness. There was also a hope that there would be teachers in secondary school who would practise as well, perhaps based on the experience that mindfulness can help teachers manage their own emotional reactivity.

Yasmine: Yes sometimes the teacher could just step back and do something before shouting at the whole class, just getting one person to stay in.

Mabel: They could maybe think, everybody is being crazy may be we need to do a mindfulness practice so they'd help, the teacher would help us.

Being a Mastermind also aided practice as Frankie expresses: "I would say teach other people it and then you would feel proud and you will want to keep on doing it to teach other people". In summary, there were



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rich descriptions of the importance of community in supporting the practice and acceptability of mindfulness, which included both the embedding of mindfulness within the school, and also the perceived attitude of peers and parents.

Being able to move while practicing, rather than just sitting still, was another robust subordinate theme. Most of the children described practices involving some *movement*, for example, shake and freeze, the snowflake practice, petal practice and finger breathing as their favourite practices. Henry explained that moving helped them to be calm and relax:

Henry: I like the snowflake practice as you're standing up and you are letting your arms float so you can do pretty much whatever you want with your arms, and when you crouch down, I like that as well .... I find it more calming as you can let your body be free, rather than a FOFBOC when you are in one position.

Bess talked about how moving feels more natural and that she does not like the still practices: "I always feel like I want to move around it feels really strange if I stand still and I feel like I'm going to fall as well". Although, as Henry described earlier, the sensations of movement can be experienced as distracting at times, movement can also be fun and interesting sensation-wise:

Interviewer: Shake and freeze why is that your favourite one?

Sunny: Cos its fun and you get all tingly in your hands as you've shaken them and you can just feel some of it .... And maybe like you haven't felt that thing in your hands before, so it feels weird.

Moreover, it can help with managing sleepiness, as mentioned by Yasmine in the previous section on challenges and strategies:

A final subordinate theme was around *ongoing practice*. Having a regular practice and a substantial input made it more likely to continue. Liam describes why: "well like Mabel said, it's sort of automatic now we've been doing it for so long and it really works for us, we know it works for us". Believing your practice "works" was an encouragement to keep practicing, as Oksana said "just doing it helps me". A belief that it will be helpful in the future was also supportive.

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Oksana: Keep doing it cos then you'll keep wanting to do it and keep remembering mindfulness. Cos otherwise say you got fired from a job when you're an adult and you're really stressed about it, to calm yourself down, cos you get all sorts done to you when you are an adult.

Henry made a similar point about how mindfulness practice might help promote future achievement.

Henry: I think just carry on with it and you never know it might come in really handy but say, someone your range level in smartness, that sounds a weird way to put it, like if you do a mindfulness practice they could get higher than you but you would get higher than them, you're more relaxed and you got a more open mind than them.

## Discussion

Research into the mechanisms of mindfulness has suggested that it might help cultivate key foundational self-regulatory skills involving attention and emotion regulation that are essential for adaptive psychological functioning across the life-span (Zoogman et al. 2015, Kaunhoven & Dorjee, 2017). The present study, through the use of focus groups and an inductive thematic analysis, enabled the children to give a rich description of their perspective of this, including insights into mechanisms and processes that may be involved in emotion regulation. The themes identified provide the framework for the discussion.

### Process aspects of emotion regulation

Being able to move one's attention to a present moment focus was highlighted in the children's descriptions. This is a key mechanism of mindfulness (Kabat-Zinn, 2005; Teasdale et al., 1995) and attention is one of the three axioms of mindfulness (Shapiro et al., 2006). The children seemed to use the present moment focus in several ways to help their emotion regulation. The first involved changing the content of what the mind is processing, the "what" (Teasdale and Chaskalson, 2011). Here the children focused on colouring, on the body, the breath, or the task in hand. However, the data demonstrated that they also changed the "how" of the processing by stepping back and noticing what was happening (Teasdale et al., 1995; Teasdale and Chaskalson, 2011). Within this stepping back, a different view of mental contents was possible. This metacognitive ability of decentering, taking a "present-focused, non-judgmental stance

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in regard to thoughts and feelings and to accept them” (Fresco, et al., 2007, p. 448; Segal et al., 2013) has also been labeled *reperceiving* (Shapiro et al., 2006). Although it is one of the central mechanisms underlying beneficial effects of mindfulness-based interventions in adults (e.g., Hoge et al., 2015), similar research with children is virtually absent.

Further studies could investigate whether *decentering* is part of a linear process or not. Is the process of stepping back a necessary and/or sufficient step prior to intentional action, for example? Certainly, within the children’s descriptions there are suggestions that stepping back enabled alternative perspectives. It has been proposed that mindfulness also promotes “positive reappraisal”, and such reappraisals “facilitate positive affect and adaptive behavior” (Garland, Farb, Goldin & Fredrickson, 2015, p. 295). This fits with some of the children’s descriptions about how mindfulness helps them with feeling good, and acting in an intentional way (as discussed below). In addition, several children talked about how mindfulness encouraged a feeling of security, perhaps cultivating a secure attachment with oneself (Siegal, 2007; Snyder, Shapiro and Treleaven, 2012). These are aspects to explore by future research, particularly as attachment style influences well-being across the lifespan (Music, 2011; 2016).

Children also reported that mindfulness enabled intentional action, responding rather than reacting. This enabled them to manage challenges more effectively. Many of these intentional responses were relational. Further quantitative research could investigate whether improved interpersonal relationships and performance are indeed a result of mindfulness practice in this age group, particularly as research with older adolescents has suggested that interpersonal problems may be reduced after MBSR (Gouda, Luong, Schmidt & Bauer, 2016).

### **Dysregulation prompt**

A further key finding was that children seemed to view their mindfulness practice as largely instrumental – they were prompted to practise mindfulness by an experience of dysregulation. In other words, they seemed to practise mindfulness when they needed it, rather than by developing formal practice at home. Although previous research has found most adolescents do not practise regularly outside of the lessons (Huppert and Johnson, 2010), all the children who participated in our study said they practised daily or often. This practice seemed to be prompted by difficult experiences and did not fall neatly into the dichotomy of formal/informal use as practiced within adult MBCT/MBSR. Indeed, the short practices they used when prompted by experiences of dysregulation seemed to remind them to take a mindful approach to

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their current experience, similar to the “responsive three step breathing space“ of MBCT (Segal et al., 2013). Further research is needed to investigate this type of usage, for example, whether children tend to do a short practice in moments of stress, or just a momentary stepping back, which allows a mindful approach. Further studies could investigate the amount and intensity of input required from school to support this type of mindful approach to everyday situations.

In mindfulness courses for adults, there is often an invitation to let your goal or objectives go, to “practice without attachment to outcome” (Kabat-Zinn, 2003, p148). This is one of the great paradoxes of mindfulness: that we practise with an intention, one of the three axioms of the IAA (intention, attention, attitude) model of mindfulness (Shapiro et al., 2006), but in order to benefit the most, we need to let go of particular aspirations, and accept how things are right now. The children commonly talked about practicing mindfulness to help them “do better” at things like tests, or performances, or being able to get to sleep. This is strongly present through their narratives, and the instrumentality and problem-focused nature of their practice supports this. However, there were also examples of acceptance. The description many of the children gave of being able to focus on the present and step back, to see what is happening right in this moment, suggests there was some understanding and practicing of non-attachment to outcome.

There are several possible explanations of this strong account of instrumentality, including how the research questions scaffolded children’s answers, as well as how the intention of the practices was conveyed and taught to them in school. Unlike adults, these children had not chosen initially to come to a mindfulness class. Therefore, a clear explanation of the rationale behind practicing was an important motivator. It is also possible that children in this age group experience difficulty in understanding this paradox cognitively, and expressing such understanding in language, particularly as abstract thought and language skills are still developing (Keenan & Evans, 2009). In addition, whilst intention in adults seems to change over time (Shapiro, 1992), longitudinal research could investigate whether the same is true for children. Finally, the children may have practised in a problem-focused, instrumental manner, but this also clearly benefited their emotion regulation. It would be interesting to explore whether those children who demonstrate more acceptance benefit more from their practice than those who do not.

### Challenges and strategies

The children described how managing the challenges of practicing mindfulness contributed to or hindered their emotion regulation. They described how some unfavourable conditions, like noise or the

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wandering mind that acted as obstacles to their practice, could also act as dysregulators. This is “discrepancy-based processing” at work, the mind comparing how it is just now with how we want it to be, and a key factor in the maintenance of distress (Segal et al., 2013). The children in this sample experienced difficulty in skillfully managing these challenges, and certainly experienced dysregulation as a result. Although managing a wandering mind is explicitly covered in MiSP programmes within the helpful metaphor of the puppy, it may be that children require additional help with the most common distractions within the school environment, such as noise or embarrassment. Perhaps greater explicitness around “non-attachment to outcome” and discrepancy-based processing could support this as well as practical support in providing a quiet place or time to practise.

An essential method of relating to the wandering mind taught both implicitly and explicitly within MBSR/MBCT traditions is that of the attitude towards our experience. Can we relate with kindness and curiosity towards what is happening, including the wandering mind, or noise outside? The attitude we bring to how we are attending is the third axiom of the IAA model of mindfulness (Shapiro et al., 2006). However, the language of kindness and self-compassion towards their experience was noticeably absent from the children’s descriptions of their experience. There was, perhaps, some implicit understanding that kindness was important as seen in the use of the puppy metaphor, and in the more supportive inner voices that arose within the stepping-back process. However, mindfulness implementation in schools has emphasized the attention-training elements of the approach rather than the attitude of kindness. There are also limited opportunities for enquiry, given both the developmental stage of the children, and the whole-class conscript delivery. Within the secular mindfulness field more widely, self-compassion has been gaining popularity as providing explicit teaching and practices in cultivating kindness towards experience and preliminary research is promising (Neff & Germer, 2013). Future research could investigate not only the feasibility and acceptability of these practices, developmentally adapted, but also whether they supported children in responding to all of their experience, including the wandering mind, feelings of embarrassment, over-excitement, and noisy peers.

### Conditions

The importance of a supportive community was a key condition reported by the children, and one that is emphasized in adult contexts too, in the importance of group aspects of MBSR/MBCT, for example (McCown et al., 2011). Children plainly appreciated the embeddedness of mindfulness in this school and

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reported several aspects of community support. These children stated that the layering, and amount of opportunities they received through the spiral programme, sustained and developed their practice. This fits with research evidence that in order to be effective, well-being programmes in schools need to be of sufficient length, with both core learning, practice and top-up sessions (Weare, 2015). Clearly the embedding of mindfulness in a school like this one mitigates embarrassment by building a supportive and understanding community. For these children approaching their teenage years, “fitting in” with their peers was of growing importance (Dunn, 2004). The children reported that they feared that the loss of this supportive community as they transitioned to secondary school would have an impact on their practice. Liaison with secondary schools might help with this, as secondary age mindfulness programmes are available and could be introduced. Providing mindfulness teaching to parents who are interested may also enable the growth of a supportive community at home, if not at school.

What is taught, as well as how it is taught, is also important. The children reported that the practices themselves helped because of their ease of use. They were discreet, quick, transferable in time and place. Many of them involved movement, which made them more accessible to children. There was a variety, and they could choose which one fitted present circumstances the best. However, there was variation across the children. Although most preferred quiet, for one child, quiet was distracting. A couple of children found the practices not discreet enough and wanted more discreet ones. Mindfulness helped some children to rest and digest; another found it made her feel tired. This is the challenge of any group or classroom: how can classroom activities be adapted to be as inclusive as possible. After all, every child is unique.

### Limitations

This group of participants had the benefit of learning mindfulness in a school where it was truly embedded and part of a spiral programme, and were also self-selected. As such, they may be unrepresentative of the majority of children who receive mindfulness programmes in school. The general school population itself may not be representative of areas with greater ethnic diversity. There was also a gender bias in the focus groups in that only 3 out of 15 were boys despite the proportion of boys and girls in the school year being very similar. There is some research suggesting gender differences in relation to mindfulness training in schools, with girls possibly benefiting more (Kang et al., 2018) or perhaps the girls were more willing to discuss their experiences. This study was particularly interested in the children’s

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experiences as reported by themselves. However, separate focus groups with parents or teachers may have further developed understanding around how children apply mindfulness in their lives. It would be interesting to investigate, for example, the impact of parents' understandings of mindfulness, or their own mindfulness practice, on children's mindfulness practice.

The focus groups themselves were interrupted in several instances by students and teachers coming into the room for resources. This may have disturbed the flow and level of ease the children felt on the occasion, although this was not evident. Being in a focus group with their peers may have affected their answers despite careful consideration given to this. This study included a relatively small sample, and further research could explore findings from larger samples. Finally, the results will have been influenced by the researcher's own epistemologies, not least as a child psychologist and a mindfulness teacher.

### Conflict of Interests:

JKH teaches the Paws b curriculum on occasion and is remunerated for this work as part of her duties of employment. JCH declares she has no conflict of interests. DD provided initial advice on inclusion of neuroscience content into the Paws b curriculum without remuneration, does not hold any IP for the Paws b curriculum and does not have any financial interests in the Paws b curriculum; she is not affiliated with the Mindfulness in Schools Project providing training in the Paws b curriculum. DD has been collaborating with Sarah Silverton and Tabitha Sawyer, the two main authors of the Paws b who are not receiving royalties from the Paws b curriculum, and Ysgol Pen Y Bryn where the Paws b curriculum was developed (also with no financial interests) on the development of another primary school curriculum (The Present Course for Primary Schools) and is a co-director of a community interest company providing training in the Present Course.

### **Ethics statement:**

Funding: This study received no funding.

Ethical approval: This article does not contain any studies with animals performed by any of the authors.

Ethical approval was provided by the School of Psychology at Bangor University.

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All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

### Informed Consent:

Participation in this research was entirely voluntary and required both parents informed consent and children's informed assent.

### Author Contributions

JKH: designed and executed the study, analysed the data and wrote the paper. JCH collaborated with the design of the study and analysis of the data, and edited the manuscript. DD: collaborated with the design of the study and the analysis of the data and collaborated in the writing and editing of the manuscript.

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*Table 1: Participants in the three post-intervention focus groups*

| Focus Group | Pseudonyms (age) |
|-------------|------------------|
|-------------|------------------|

## Children applying mindfulness

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|   |  |
|---|--|
| A | Frankie (11), Esme (11), Julie (11), Monique (11), Sunny (11), Lola (10), Oksana (11). |
| B | Mabel (10), Yasmine (10), Liam (11), John (10), Bess (10).                             |
| C | Enid (10), Mia (11), Henry (11).   |

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## Appendix A: My Mindfulness Practice

Name:

1. How old are you?
2. Did you like doing mindfulness in school?  
Please tick one box

Not at all  
much

Very

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
|   |   |   |   |   |   |   |

3. How often did you practice mindfulness outside of the school lessons (at home)?

- ☐ Never
- ☐ Rarely
- ☐ Often
- ☐ Every day

4. Which mindfulness practices do you choose to do the most?

.....

5. How often does mindfulness help you with things that happen in your life?

- ☐ Never
- ☐ Rarely
- ☐ Often
- ☐ Every day

6. How is mindfulness helpful to you?

.....

.....

7. What do you find difficult or unhelpful about mindfulness?

.....

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